Sluicing in Mauritian : a fragment analysis

Abstract

Since Ross (1969), sluicing has been a subject of syntactic debate: is the sluice a clause with full syntactic structure (Merchant 2001, Van Craenenbroeck 2010…) or just a reduced fragment (Ginzburg & Sag 2000, Culicover & Jackendoff 2005…)? We uncover some syntactic properties of sluices in Mauritian, a French-based creole, arguing for a base-generated fragment analysis.

1   Mauritian sluices

Little work has been done on ellipsis in creoles (Costa et al. 2011). Mauritian, a French-based Creole spoken in Mauritius, with no official status, is an understudied language (Baker 1972, Henri 2010, Syea 2012…). We rely on fieldwork surveys and on the few corpora available such as Virahsawmy's writings.

1.1   Verb form alternations and sluicing

Mauritian, a French based creole spoken in Mauritius, has two verb forms for 70% of the verbs (*al/ale* 'go', *manz/manze* 'eat', *koz/koze* 'speak', *konn/kone* 'know' etc): a short form (SF) used with a canonical phrasal complement (1), and a long form (LF) used otherwise (2) (Baker 1972, Henri 2010).[1] Interestingly, only the LF is allowed with a clausal complement (2b,c):

(1)   a. Mo   manz   pom.
         1SG eat.SF apple
         'I eat apples.'
      b. Mo koz   ek   Pol.
         1SG speak.SF with Pol
      'I speak with Paul'

(2)   a. Mo 'nn   manze.
         1SG PERF   eat.LF
         'I have eaten.'
      b. Mo panse /*pans (ki) li pe   ale.
         1SG think.LF/*SF that 3SG PROG go
         'I think that he will go.

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[1] In the case of verum focus or verb focus, the LF can also be used with a postverbal phrasal complement (Henri 2010)(*Me Pol inn MANZE pom la* ! 'But Paul DID eat the apple!'). We ignore it here. Some postverbal adverbs also trigger the SF and can be analysed as verbal complements : *Pol dans bien*. (Paul dance.SF well 'Paul dances well')

c.   Mo   pa   trouve/ *trouv si
     1SG NEG   see.LF/*SF   if
     Pol   pe   koze.'
     Paul PROG speak.LF
     'I don't see whether Paul is speaking.'

In wh-interrogatives, the wh-phrase usually occurs in a left peripheral position (3a,c), and the LF is used. But it can also in situ, without an echo interpretation (Syea 2017) and the SF is used (3b,d).

(3)   a. Ki   gato to'nn manze/*manz ?
          Which cake 2SG PERF eat.LF/*SF ?
       b. To'nn   manz ki   gato?
          2SG PERF   eat.SF which cake ?
          'Which cake did you eat?'
       c. Ek kisannla to'nn koze/*koz ?
          With who 2SG PERF speak.LF/*SF ?
          'With whom did you speak?'
       d. To'nn   koz   ek kisannla ?
          2SG PERF speak.SF with   who?
          'You spoke with whom?'

The main verb is also LF when followed by a wh-interrogative clause (4a,5a) or a sluice (4b,5b), unless there is another complement before the interrogative (5c) or the sluice (5d). The sluice thus behaves like a clausal complement.

(4)   a. Pol inn manz bann gato, me mo
          Paul PERF   eat PLU cake, but 1SG
          pa'nn   trouve/*trouv,   ki
          NEG'PERF   see.LF/*see.SF which
          gato li   'nn   manze]
          cake 3SG   PERF eat.LF.
          'Paul has eaten cakes but I did not see which cake he ate.'
       b. Pol inn manz bann gato, me mo
          Paul   PERF eat PLU cake, but 1SG
          pa 'nn   trouve/*trouv, [ki gato].
          NEG'PERF see.LF/*SF [which cake].
          'Paul has eaten cakes but I didn't see which cake.'
(5)   a.Pol inn   koz   ek
          Pol PERF speak.SF   with
          kikenn me mo   pa   kone/*konn
          someone but 1SG NEG know.LF/*SF
          ek kisannla li   'nn koze.
          [[with who] 3SG PERF speak.LF]
          'Paul spoke with someone but I don't know with whom he spoke.'

b. Pol inn koz ek kikenn
   Pol PERF speak.SF with someone
me mo pa kone/*konn [ek kisannla].
   but 1SG NEG know.LF/*SF [with who]
'Paul spoke with someone but I don't know with whom

c. Pol inn manz bann gato me mo
   Pol PERF eat.SF PLU cake but 1SG
demann [mwa] [ki gato li' nn manze].
ask.SF 1SG [which cake 3SG PERF eat.LF]
'Paul ate some cakes but I ask myself which cakes he ate.'

d. Li'nn demann [mwa] [kiler la].
   3SG PERF ask.SF [1SG] [whichtime DEM]
'He asked me what time it is.'

1.2 Wh-words and sluicing

As in French, most wh- words can occur fronted or in situ: *kisannla* (who), *kifer* (why), *kouma* (how), *komie* (how much). However, with the inanimate 'what', two forms are in complementary distribution : *ki* must be extracted (6a), while *kiete* appears in situ (6b) or in isolation (6c).[2]

(6) a. Ki/*Kiete to pou manze?
       What 2SG FUT eat.LF
       'What will you eat?'
   b. To pou manz *ki/kiete
      2SG FUT eat.SF what ?
      'You will eat what?'
   c. Spk1– Pol inn manz brinzel.
           Pol PERF eat.SF eggplant
           'Paul ate eggplant.'
      Spk2- Kiete/#Ki ?
            'What?'

Similary with the locative interrogative ('where')[3] : a weak form, *kot* must be extracted (7a) and strong form *kote* must be in situ (7b) or in isolation (7c).

(7)   a. Kot/*Kote to pou ale?
          Where 2SG FUT go.LF
          'Where will you go?'
       b. To pou al kote/*kot?
          You FUT go.SF where ?
          'You will go where?'

[2] There are several forms ki : the wh determiner (which), the wh pronoun (what), the complementizer (that), the discourse particle (what?!).

[3] A third form *kotsa* ('where') does not have these restrictions and behaves like other wh- words.

c. Spk1– Pol inn al deor.
         Pol PERF go.SF abroad
         'Paul went abroad.'
   Spk2- Kote/*Kot ?
         'Where?'

Notice that the strong forms may also occur in the left periphery with piedpiping.

(8)   a. Li ekrir avek kiete/*ki?
          3SG write with what
          'He writes with what?'
       b. Avek kiete/*ki li ekrir?
          With what he write ?
          'With what does he write?'
       c. So vol pe vinn depi kote/*kot?
          POSS flight PROG come.SF from where
          'His flight is coming from where?'
       d. Depi kote/*kot so vol
          From where POSS flight
          pe vini ?
          PROG come.LF
          'From where is his flight coming?'

Interestingly, only the in situ forms, *kote* and *kiete*, are allowed in sluicing, whereas only *kot*, *ki* are allowed in full subordinate clauses:

(9) a. Pol inn manz kitsoz me mo
       Pol PERF eat.SF something but 1SG
       pa 'nn trouve kiete/*ki.
       NEG PERF see.LF what
    'Paul ate something but I didn't see what.'
    b. To 'nn ferm li dan enn kaso,
       2SG PERF lock.SF 3SG in IND jail,
       mo pa kone kote/*kot. [4]
       1SG NEG know.LF where
       'You locked him in a jail, I don't know where.'
    c. Mo pa 'nn trouve [ki /*kiete
       1SG NEG PERF see.LF [what
       Pol inn manze].
       Pol PERF eat.LF].
       'I didn't find out what Paul has eaten.'
    d. Mo pa kone, [kot/*kote to'nn ferm li].
       1SG not know.LF [where 2SG PERF lock.SF 3SG]
       'I don't know where you locked him.'

These data challenge a deletion analysis of sluices as clauses with an extracted element (10a). Notice that an embedded interrogative

[4] (act 1 scene 7, Toufann, Virahsawmy)

clause with an situ *wh* element is not possible (10b,c), outside echo uses:

(10) a. Paul has left somewhere but I don't know [where ~~he left~~].

    b. *Mo pa 'nn trouve, Pol inn
      1SG NEG PERF see.LF Pol PERF
      manz kiete.
       eat.SF what
       'I didn't see what Paul has eaten'
  c. * Mo pa kone, Pol inn al kote.
  1SG NEG know.LF Pol PERF go.SF where
      'I do not know where Paul has gone'

An alternative deletion analysis could be based on cleft structures, which only allow for strong wh- forms (11), as proposed for *spading* (Van Craenenbroeck 2010).

(11) a. Se kiete/*ki ki 'nn kase ?
      It's what that PERF break.LF
      'It is what that has broken ?'
    b. Se kote/*kot ki to pe ale ?
      It's where that 2SG PERF go.LF
      'It is where that you went ?'

It would have to explain why deletion cannot apply to regular wh-interrogatives in Mauritian. It would also left unexplained the possibility of preposition omission in sluices (12a), which is not possible in clefts (12c) nor in full wh-clauses (12d). Like French, Mauritian is a not preposition stranding language (12d), see also Sag & Nykiel 2011, Nykiel (2013).

(12)   a. Pol inn koz ek enn kamarad,
      Pol PERF spek.SF with IND friend
      me mo pa kone (ek) kisannla.
      but 1SG NEG know.LF (with) who
      'Paul has spoken with a friend
      but I don't know (with) whom'
    b. Mo pa kone *(ek) kisannla
      1SG NEG know.LF with whom
      li 'nn koze.
      3SG PERF speak.LF
      'I don't know with whom he spoke.'
    c. Se *(ek) kisannla ki li'nn koze?
    It's with whom that 3SG PERF speak.LF
      'It is with whom that he spoke ?'
    d. * Kisannla Pol inn koz/koze ek ?
     Who Pol PERF speak.SF/LF with ?
     Who did Paul speak with ?

2. An HPSG analysis
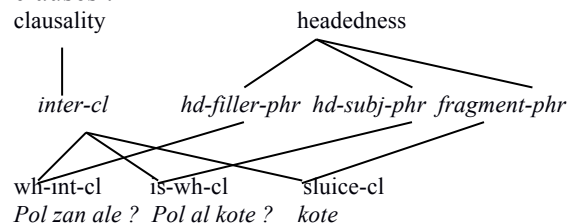Mauritian sluices exhibit hybrid syntactic properties: on the one hand, they do not trigger

the matrix verb SF like clausal complements and unlike phrasal ones. On the other hand, they only comprise in situ wh- words, unlike embedded interrogative clauses. To reconcile these apparently contradictory properties, we analyse sluices as base-generated fragments using Ginzburg & Sag (2000)'s analysis: they behave externally as clauses but internally as phrases:

(13)   a. Mo trouve [[kisannla]$_{NP}$]$_S$
      1SG see.LF [[who]$_{NP}$]$_S$
      'I see who (will come).'
  b. Mo pa kone [kote]$_{Adv}$]$_S$
      1SG NEG know.LF [[where]$_{Adv}$]$_S$
      'I do not know where (he went).'
  c. To'nn trouv [kisannla]$_{NP}$?
      2SG PERF see.SF [who]$_{NP}$?
      'You saw who?'
  d. Pol inn al [kote]$_{Adv}$?
      Pol PERF go.SF [where]$_{Adv}$?
      'Paul went where?'

Wh- words used as sluices (13a,b) thus differ from their in situ uses which do not project a unary clause and trigger the verb SF (13c,d).
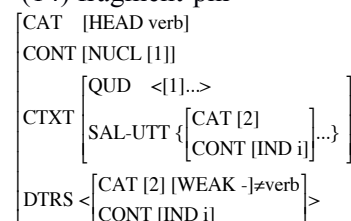
2.1 Sluices as fragments

As in G&S, we rely on a cross-classification of clauses :

clausality   headedness

   inter-cl   *hd-filler-phr hd-subj-phr fragment-phr*

wh-int-cl   is-wh-cl   sluice-cl
Pol zan ale ? Pol al kote ? kote

Fragments may be declarative (for short answers) or interrogative (for short questions and sluices). They are unary clauses dominating a non verbal head, with a propositional content inherited from the context (QUD) ; they are coindexed with a salient constituent (SAL-UTT), *kikenn* in (5b), *deor* in (7c), *kitsoz* in (9a), and obey syntactic parallelism constraints.

(14) fragment-phr =>

$$\begin{bmatrix} \text{CAT} & [\text{HEAD verb}] \\ \text{CONT} & [\text{NUCL [1]}] \\ \text{CTXT} & \begin{bmatrix} \text{QUD} & <[1]...> \\ \text{SAL-UTT} \{ \begin{bmatrix} \text{CAT [2]} \\ \text{CONT [IND i]} \end{bmatrix} ...\} \end{bmatrix} \\ \text{DTRS} & < \begin{bmatrix} \text{CAT [2] [WEAK -]} \neq \text{verb} \\ \text{CONT [IND i]} \end{bmatrix} > \end{bmatrix}$$

sluice-cl=> fragment-phr & inter-cl
[DTRS <[NON-LOC [WH {[IND i]}]]>]

As in English, the fragment Head-daughter may be prepositional (15a), nominal (13a,15b) or adverbial (13b). As the propositional nucleus is inherited from the previous turn, they are interpreted as full clauses : 'With whom did Paul speak ?' 'Who will come ?' How many apples did Paul buy ?'.

(15)   a.Spk1: Pol inn koz ek kamarad.
                'Paul spoke with a friend.'
         Spk 2: (Ek) kisannla ?
                (with) whom ?
         b. Spk1-Bann dimounn po vini.
            'Some people are coming.'
         Spk2- Kisannla ?
                'Who?'
         c.   Spk1 - Pol inn aste pom.
                'Paul bought apples.'
             Spk2- Komie?
                'How many ?'

In this analysis, preposition omission can be easily handled : the salient correlate can be the whole PP or the internal NP, hence two possible fragments in (15a).

2.2. Verb form alternation

To account for verb alternation, we rely on two constraints on verb forms, leaving aside verum focus (Henri 2010): the SF requires a non empty list of complements (COMPS) while an empty COMPS list triggers the LF:

(16) Lexical constraints on verbs:
[HEAD VFORM SF] => [COMPS nelist]
[COMPS elist] => [HEAD VFORM LF]

Using Bouma et al. 2001 lexical analysis of extraction, words obey an argument conservation principle (17): an extracted complement has a non canonical Synsem and belongs to the verb Argument structure (ARG-ST), but not to its COMPS list, hence the LF.
Using Kay ad Sag (2009) analysis of extraposition, a clausal complement is analysed as extraposed (Henri 2010): it belongs to the EXTRA feature and does not appear on the verb COMPS list, hence the LF. The same applies to sluices.
(17) Argument conservation principle:
word=>

$$\begin{bmatrix} \text{VAL} \begin{bmatrix} S\text{UBJ } [1] \\ \text{SPR } [2] \\ \text{COMPS } [3]n-sent-list \end{bmatrix} \\ \text{ARG} - \text{ST } [1] \oplus [2] \oplus [3] \oplus list (non-canon) \oplus [4] \\ \text{EXTRA } [4] \end{bmatrix}$$
with n-sent-list= non sentential list

We thus have different forms for verbs, depending on their argument realization:

koz ('speak')(no extraction):

$$\begin{bmatrix} \text{HEAD SF} \\ \text{VAL} \begin{bmatrix} \text{SUBJ } <[1]> \\ \text{COMPS } <[2]> \end{bmatrix} \\ \text{ARG-ST } <[1]\text{NP}[canon],[2]\text{PP}\begin{bmatrix} canon \\ \text{FORM ek/avek} \end{bmatrix}> \end{bmatrix}$$

koze ('speak')(extracted complement)

$$\begin{bmatrix} \text{HEAD LF} \\ \text{VAL} \begin{bmatrix} \text{SUBJ } <[1]> \\ \text{COMPS } <> \end{bmatrix} \\ \text{ARG-ST } <[1]\text{NP}[canon],[2]\text{PP}\begin{bmatrix} gap \\ \text{FORM ek/avek} \end{bmatrix}> \\ \text{SLASH}\{[2]\} \end{bmatrix}$$

kone ('know')(with an interrogative clause)

$$\begin{bmatrix} \text{HEAD LF} \\ \text{VAL} \begin{bmatrix} \text{SUBJ } <[1]> \\ \text{COMPS } <> \end{bmatrix} \\ \text{ARG-ST } <[1]\text{NP}[canon],[2]\text{S}[inter-cl]> \\ \text{EXTRA } \{[2]\} \end{bmatrix}$$

2.3. Weak and strong wh- words

Following G&S, we use a non local WH feature, which marks the filler of wh-interrogative clauses and ensures pied piping.
The observation that different wh- forms are used fronted and *in situ* may be a challenge for movement-based analyses of extraction. We use a WEAK feature, which is + for *kot/ki*, - for *kote/kiete,* and underspecified for other wh-words.

kot: $$\begin{bmatrix} \text{CAT [WEAK +]} \\ \text{CONT [1]}\begin{bmatrix} \text{IND i} \\ \text{RELS } \{\begin{bmatrix} rel\text{-}place \\ \text{ARG i} \end{bmatrix}\} \end{bmatrix} \\ \text{NON-LOC [WH }\{[1]\}] \end{bmatrix}$$

$$kote: \begin{bmatrix} \text{CAT [WEAK -]} \\ \text{CONT [1]} \begin{bmatrix} \text{IND i} \\ \text{RELS } \{ \begin{bmatrix} \text{rel-place} \\ \text{ARG i} \end{bmatrix} \} \end{bmatrix} \\ \text{NON-LOC [WH } \{([1])\}] \end{bmatrix}$$

In Mauritian, personal pronouns also come in two forms: *mo, to* ('I', 'you')(weak) and *mwa, twa* ('me', 'you')(strong): fragments (14) and complements must be [WEAK-], while subjects must be [WEAK+]:

(18)   a. Pol   inn   trouv   twa/*to.
           Paul PERF find.SF   2SG
           'Paul has found you.'
        b. Mo/*Mwa pou vini
          1SG   FUT come.LF
          'I will come'
        c. Spk1-Kisannla pou vini?
             Who FUT come.LF ?
           'Who will come?'
        Spk2- Mwa/*Mo.
           1SG   'Me'

Clefted elements, as other complements, must be [WEAK-].

(19)a. Head-Subj-phr=>
      SUBJ-DTR [WEAK+]
 b. Head-Comps-phr=>
   COMPS-DTR list ([WEAK -])

Sluices, as other fragments, must be [WEAK-]. Wh- fillers, on the other hand, must be [WEAK +]. We consider it a constraint on interrogative clauses, while it may be a more general constraint on fillers:
wh-inter-cl => FILLER-DTR [WEAK +]

Conclusion

We show that Mauritian sluices exhibit hybrid syntactic properties. On the one hand, they do not trigger the short form of the matrix verb, like clausal complements and unlike phrasal complements. On the other hand, they do not have the internal structure of an interrogative clause and only comprise in situ wh- words. These properties challenge a syntactic deletion analysis of sluices. We show that they can be handled by a HPSG grammar following Ginzburg &Sag 2000's fragment analysis.

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